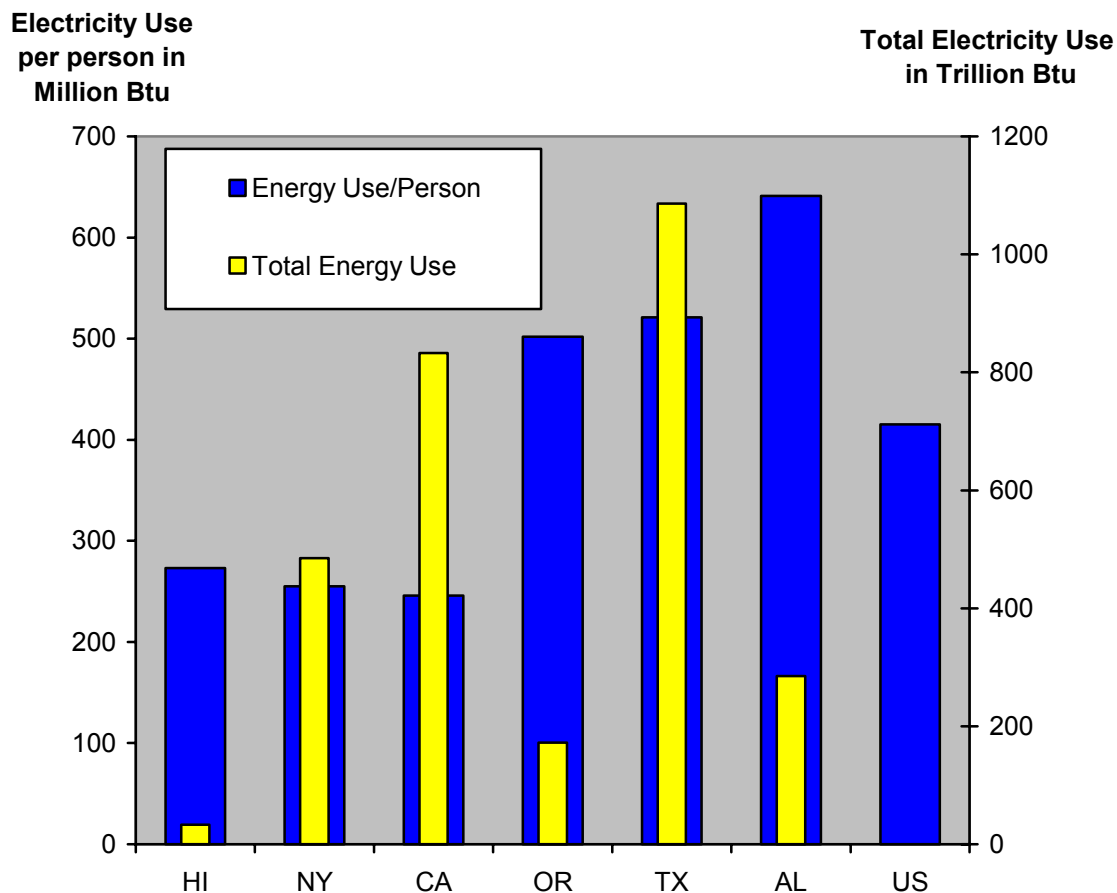


CALIFORNIA'S ENERGY EFFICIENCY AND MITIGATING CLIMATE CHANGE

California is the most populous state in the United States, but it ranks second in total energy consumption behind Texas. However, energy consumption per person in California is among the lowest in the country. Hawaii has the lowest energy use per person and Alaska currently uses more energy per capita than any other state. While California does have a high level of energy efficiency, much more can be done to improve upon our levels of energy consumption.



Source: U.S. Department of Energy, 2000.

ENERGY EFFICIENCY AND CLIMATE CHANGE

While the State of California has been engaged for years in improving energy efficiency, often with great results, there is now a greater need to intensify these efforts than ever before. A decline in overall energy use by residents and businesses within California would reduce the state's dependence on imported oil and natural gas and contribute to stability and reliability of our electricity markets. Increasing the efficiency with which we use energy in California is one of the most economical and beneficial ways the state can combat climate change. The production, distribution, and use of energy (e.g., electricity, natural gas, motor fuel) is responsible for the vast majority of California's total greenhouse gas emissions. Even very small efficiency improvements made by individual consumers can lead to significant emission reductions when added up across California's growing population.

WHAT ARE OTHER STATES & LOCAL GOVERNMENTS DOING?

Several states have targeted energy efficiency as a cornerstone of their policies to limit greenhouse gas emissions. The state of Hawaii has implemented energy building codes that will reduce greenhouse gas emissions up to 47,000 tons of carbon by 2011. Similarly, the state of Oregon has developed energy codes which will save enough energy to power 40,000 homes by 2015. The City of Philadelphia replaced 28,000 traffic signals resulting in annual savings of \$1 million dollars in energy expenditures while reducing greenhouse gas emissions by almost 7,000 tons of carbon.

WHAT ADDITIONAL ACTIONS SHOULD CALIFORNIA CONSIDER?

CONTINUE TO IMPROVE ENERGY EFFICIENCY OF BUILDINGS

The state should continue to pursue options to increase the energy efficiency of buildings in both the public and private sectors through stricter standards, better training and targeted investments. One example of ways to promote efficiency is the “*Building Better Buildings: A Blueprint for Sustainable State Facilities*” initiative in California.

IMPROVE ENERGY EFFICIENCY OF APPLIANCES, MACHINERY AND OTHER PROCESSES

Appliance standards are set at the federal level, but California can still take action to improve the energy efficiency of the appliances used in the state. This can be done by educational efforts, supporting research, and by advocacy with the federal regulators.

IMPROVE ENERGY EFFICIENCY IN AGRICULTURE

Agricultural energy use generally falls into five main categories: equipment operations, irrigation pumping, embodied energy in fertilizers and chemicals, product transport, and drying and processing. While technologies are continually developed in efforts to reduce energy use, many barriers still exist to their adoption. Some of these developments may have dual benefit for climate change by simultaneously increasing soil carbon storage and reducing emissions based upon lowered energy requirements.

IMPROVE ENERGY EFFICIENCY WITHIN THE INDUSTRIAL SECTOR

California’s industrial sector has 40% of total electricity usage consumed by four industries: Food / Electronics / Stone, Clay & Glass / Industrial Machinery. Natural gas consumption is dominated by: Petroleum refining / Food / Oil and Gas / Paper / Stone, Clay and Glass / Chemicals. These six industries account for 80% of total natural gas consumption. As the primary industrial consumers of energy, these industries should be the target for a broad range of energy efficiency programs.